

ECONOMICS 331
Mathematical Economics
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Homework Assignment 3

From homework assignment 2 we had the following demand functions:

$$q_1^d = 20 - 2p_1 + p_2 \quad q_2^d = 25 + p_1 - 3p_2$$

Use Cramer's Rule to find the inverse demand functions

$$P_i = f(q_i, q_j) \quad i = 1, 2$$

[3] In homework [2] you derived an expression for the IS and LM curves using the following macroeconomic model:

goods market	money market
1 $Y = C + I + G_0$	1 $M^d = kY - \beta r$
2 $C = C_0 + b(Y - T)$	2 $M^d = M_0^s$
3 $I = I_0 - \alpha r$	
4 $T = tY$	

- a) Use Cramer's rule to solve for the equilibrium level of income and interest rates, Y^e and r^e .
- b) From your solution for Y^e what is the coefficient in front of M_0^s ? What is its sign? What is the economic interpretation of this coefficient?